Masson'S Trichrome Staining Kit

Cat #: A-CSH273

Size: 7×50mL, 7×100mL, 7×500mL

Storage: 10-30 °C, Avoid exposure to light (1 year)

Product Description

Component		7×50mL	7×100mL	7×500mL	Store at
Reagent (A): Weigert's iron hematoxylin staining solution	A1: Weigert's solution A	25ml	50ml	250ml	10-30 °C, Avoid exposure to light
	A2: Weigert's solution B	25ml	50ml	250ml	10-30 °C
Before use, mix equal amounts of A1 and A2 to form Weigert's iron hematoxylin staining solution. It is not recommended to prepare it in advance.					
Reagent (B): Acid alcohol differentiation solution		50ml	100ml	500ml	10-30 °C
Reagent (C): Masson's blueing solution		50ml	100ml	500ml	10-30 °C
Reagent (D): Ponceau Acid Fuchsin staining solution		50ml	100ml	500ml	10-30 °C, Avoid exposure to light
Reagent (E): Weak acid solution		50ml	100ml	500ml	10-30 °C
Reagent (F): Phosphomolybdic acid solution		50ml	100ml	500ml	10-30 °C, Avoid exposure to light
Reagent (G): Aniline Blue staining solution		50ml	100ml	500ml	10-30 °C, Avoid exposure to light

Connective tissue, in a narrow sense, refers to the three types of fibers it contains: collagen fibers, reticular fibers, and elastic fibers, with collagen fibers being the most widely distributed and abundant. Masson's trichrome staining, also known as Masson's stain, is the most classic method for staining connective tissue and is an authoritative and classic technique for staining collagen fibers. The so-called trichrome staining usually refers to staining the nuclei and selectively displaying collagen fibers and muscle fibers. The staining principle of this method is related to the size of the anionic dye molecules and the tissue permeability: the size of the molecules is reflected by their molecular weight, with

small molecular weight molecules easily penetrating dense and low-permeability tissues, while large molecular weight molecules can only enter loose and highly permeable tissues. However, both light green and Aniline Blue have large molecular weights, so after Masson staining, muscle fibers appear red, and collagen fibers appear green (light green) or blue (Aniline Blue), primarily used to differentiate collagen fibers and muscle fibers. The staining is stable, the differentiation time is short (1-2 seconds), the colors are clear and vibrant, and it is suitable for staining tissue sections in paraffin and frozen sections. The stained slides can be stored for a long time without significant fading.

Usage

1. Deparaffinize the sections to water using routine procedures, and stain with prepared Weigert's iron hematoxylin for 5-10 minutes.
2. Differentiate with acid alcohol differentiation solution, rinse with water.
3. Counterstain with Masson's blueing solution, rinse with water.
4. Rinse with distilled water for 1 minute.
5. Stain with Ponceau Acid Fuchsin solution for 5-10 minutes (control staining time under a microscope).
6. Rinse with distilled water.
7. Wash with phosphomolybdic acid solution for 5-10 minutes.
8. Directly stain in Aniline Blue staining solution for 1-2 minutes.
9. Rinse with weak acid solution for 1 minute.
10. Rapidly dehydrate with 95% ethanol. Dehydrate with absolute ethanol three times, each time for 5-10 seconds.
11. Clear with xylene three times, each time for 1-2 minutes. Mount with neutral mounting medium.

Staining Results

Nuclei, collagen fibers/proteins	Blue
Cytoplasm, muscle, red blood cells	Red

Notes

1. The sections should be deparaffinized as cleanly as possible. Fixation plays an important role, and different fixatives

can extend or shorten the staining time.

2. Mixing equal amounts of A1 and A2 forms Weigert's iron hematoxylin stain, which generally loses staining power after 24 hours.

3. The differentiation time in acid alcohol should be determined based on the thickness of the sections, tissue type, and age.

4. Weak acid solution can enhance color clarity and vibrancy. If used in large quantities, it can be replaced with a self-prepared 0.1-0.3% acetic acid solution.

5. Control the differentiation of phosphomolybdic acid under a microscope. Differentiation is complete when collagen fibers appear light red and fibers appear red. Differentiation time depends on the depth of staining, usually 1-2 minutes.

6. Masson's blueing solution can be replaced with self-prepared Scott's Accelerated Blue or a 0.1-1% lithium carbonate aqueous solution.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.